

# WF225-B4150

WF

FORK SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	part no.
WF225-B4150	6022139

Other models and accessories → [www.sick.com/WF](http://www.sick.com/WF)

## Detailed technical data

### Features

<b>Functional principle</b>	Optical detection principle
<b>Dimensions (W x H x D)</b>	12 mm x 262.5 mm x 80 mm
<b>Fork width</b>	225 mm
<b>Fork depth</b>	60 mm
<b>Light source</b>	LED, infrared, Infrared light
<b>Output function</b>	Light/darkswitching, adjustable via reverse polarity

### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Ripple</b>	< 10 %
<b>Current consumption</b>	40 mA <sup>1)</sup>
<b>Switching frequency</b>	0.5 kHz
<b>Response time</b>	≤ 1 ms <sup>2)</sup>
<b>Switching output</b>	PNP/NPN
<b>Switching output (voltage)</b>	PNP: HIGH = $U_V \leq 2 \text{ V}$ / LOW approx. 0 V NPN: HIGH = approx. $U_V$ / LOW ≤ 2 V
<b>Switching mode</b>	Light/dark switching
<b>Output current <math>I_{\text{max.}}</math></b>	100 mA
<b>Connection type</b>	Male connector M8, 4-pin
<b>Protection class</b>	III <sup>3)</sup>
<b>Circuit protection</b>	Output Q short-circuit protected

<sup>1)</sup> Without load.

<sup>2)</sup> Signal transit time with resistive load.

<sup>3)</sup> Reference voltage DC 50 V.

<sup>4)</sup> Depending on fork width.

	Interference pulse suppression
<b>Enclosure rating</b>	IP65
<b>Weight</b>	Approx. 36 g ... 160 g <sup>4)</sup>
<b>Housing material</b>	Aluminum

<sup>1)</sup> Without load.

<sup>2)</sup> Signal transit time with resistive load.

<sup>3)</sup> Reference voltage DC 50 V.

<sup>4)</sup> Depending on fork width.

## Safety-related parameters

<b>MTTF<sub>D</sub></b>	97 years
<b>DC<sub>avg</sub></b>	0 %

## Ambient data

<b>Ambient operating temperature</b>	-20 °C ... +60 °C <sup>1)</sup>
<b>Ambient temperature, storage</b>	-20 °C ... +80 °C
<b>Ambient light immunity</b>	≤ 10,000 lx
<b>Shock load</b>	According to EN 60068-2-27
<b>UL File No.</b>	NRKH.E191603

<sup>1)</sup> Do not bend below 0 °C.

## Certificates

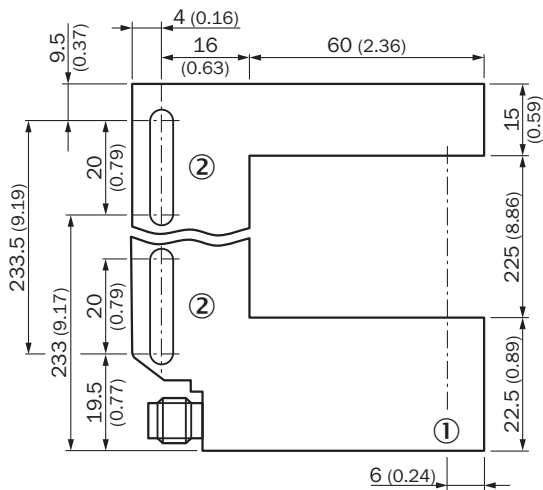
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China-RoHS</b>	✓
<b>cULus certificate</b>	✓
<b>Photobiological safety (IEC EN 62471)</b>	✓

## Classifications

<b>ECLASS 5.0</b>	27270909
<b>ECLASS 5.1.4</b>	27270909
<b>ECLASS 6.0</b>	27270909
<b>ECLASS 6.2</b>	27270909
<b>ECLASS 7.0</b>	27270909
<b>ECLASS 8.0</b>	27270909
<b>ECLASS 8.1</b>	27270909
<b>ECLASS 9.0</b>	27270909
<b>ECLASS 10.0</b>	27270909
<b>ECLASS 11.0</b>	27270909
<b>ECLASS 12.0</b>	27270909
<b>ETIM 5.0</b>	EC002720
<b>ETIM 6.0</b>	EC002720

ETIM 7.0	EC002720
ETIM 8.0	EC002720
UNSPSC 16.0901	39121528

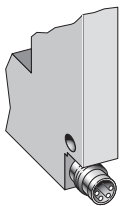
## Dimensional drawing



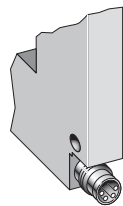
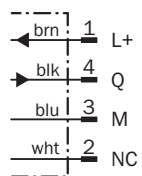
Dimensions in mm (inch)

- ① Optical axis  
② Mounting hole,  $\varnothing 4.2$  mm

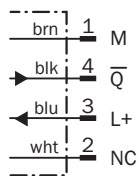
### Connection type and diagram



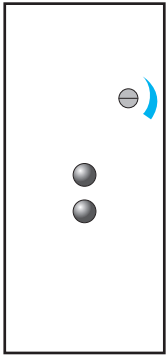
## Light switching



### Dark switching



## Adjustments



## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)